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DuPont Central Research
and Development

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August 14, 1996

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Document Processing Center (TS-790)
Attention: 8(e) Coordinator
Office of Pollution Prevention and Toxics
U. S. Environmental Protection Agency
401 M Street SW
Washington, DC 20460



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Dear 8(e) Coordinator:

Tetrakis(2,2,2-trifluoroethoxy)silane
CAS No. 338-39-6

This letter is to inform you of the results of a recently conducted acute dermal study in rabbits, and an acute inhalation study in rats with the above referenced substance (FES).

DERMAL APPROXIMATE LETHAL DOSE (ALD)

The test substance was applied to the skin of two rabbits each at a dosage of 5000 mg/kg of body weight and to one rabbit each at dosages of 670, 1500, 2300, or 3400 mg/kg for a 24-hour dermal exposure.

The results of this study indicate that the test substance, when administered for 24 hours as a single exposure to rabbits, produced clinical signs of toxicity that included limp muscle tone, and no reaction to audio, visual, or tactile stimuli at doses of 1500 mg/kg and higher. Additional clinical signs observed during the study included diarrhea, tremors, irregular respiration, spasms, prostrate posture, profuse salivation, incoordination, and abnormal gait. No clinical signs of toxicity were observed in the rabbit treated at 670 mg/kg. The skin absorption ALD was determined to be 3400 mg/kg.

INHALATION APPROXIMATE LETHAL CONCENTRATION (ALC)

Three groups of six male (CrI:CD®BR) rats each were exposed for 4 hours to concentrations of 23, 47, or 185 ppm of the test substance and its by-product in air. The test material reacts in air to form trifluoroethanol (TriFE), which was observed as a separate peak in GC analysis.

The results of this study indicate that the material is extremely toxic by inhalation. Rats displayed a diminished startle response during all exposures. However no reportable clinical signs of toxicity were observed after the exposure or in the 14-day recovery period. The ALC was determined to be 47 ppm.

INHALATION MORTALITY AND ANALYTICAL DATA

Chamber Concentrations (ppm)			Fractional Mortality (# Deaths/# Exposed)
<u>FES</u>	<u>TriFE</u>	<u>Total</u>	
7.4	16	23	0/6
15	32	47	2/6
103	82	185	5/6

Under these experimental conditions, the clinical signs and the toxicity described above appear to be reportable, based upon EPA guidance regarding the reportability of such data under TSCA Section 8(e) criteria. The test compound is a research chemical, and the exposure is limited.

Sincerely,

Charles F. Reinhardt
Charles F. Reinhardt, M.D.
Director

CFR/TK:dj
(302) 366-5285

Best Available Copy